

**ABSTRACT**

A quantum well structure according to the invention includes a quantum well layer (107) arranged between two barrier layers (109, 112). It is distinguished in that at least one of the barrier layers (109) includes nanostructures (110) which compensate or modulate a lateral homogeneity of the barrier layer (109), that exists without the nanostructures (110), that is to say a homogeneity in the directions extending perpendicularly to the stacking direction of the layers in the quantum well structure.